

MAIL STOP PETITIONS *TM*  
*DAC*

## THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gilad Odinak et al.

Attorney Docket No. INTL-1-1049

Serial No.: Pending

Group Art Unit: —

Filing Date: June 5, 2006

Examiner: —

Title: SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE  
DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION

## PETITION TO ACCORD FILING DATE

TO THE DEPUTY COMMISSIONER FOR PATENT EXAMINATION POLICY:

The Applicant petitions the Office of the Deputy Commissioner for Patent Examination Policy to accord a filing date of June 5, 2006 to the above-identified nonprovisional utility patent application pursuant to 35 U.S.C. § 111(a) and 37 C.F.R. § 1.53(b). The attached Declaration of Ms. Tricia Walker, with enclosures, supports this Petition. A fee of \$400 as required by 37 C.F.R. § 1.17(f) accompanies this Petition.

The filing date for a nonprovisional patent application is the date on which a specification as prescribed by 35 U.S.C. 112, at least one claim pursuant to 37 C.F.R. § 1.75, and any drawing as required by § 1.81(a) are received by the U.S. Patent and Trademark Office (USPTO). *See* 37 C.F.R. § 1.53(b) and MPEP § 506.02. When electronically filing a patent application, the Electronic Acknowledgment Receipt “evidences receipt on the noted date by the USPTO of the indicated documents” and “serves as evidence of receipt similar to a Post Card, as described in MPEP § 503.” *See* Walker Decl., Exhibit C.

In addition and pursuant to 37 C.F.R. § 1.53(e)(1), if an applicant fails to meet the filing date requirement for an application deposited under paragraphs 1.53(b), (c), or (d), the applicant will be so notified, if a correspondence address has been provided, and given a period of time within which to correct the filing error. *See* 37 C.F.R. § 1.53(e)(1). If, however, *a request for an application under 1.53(d) does not meet the requirements of that paragraph because the application in which the request was filed is not a design application*, and if the application in which the request was filed was itself filed on or after June 8, 1995, *the request for an application under 1.53(d) will be treated as a request for continued examination under 37 C.F.R. § 1.114. Id* (emphasis added).

On June 5, 2006, the USPTO received a specification, claims, drawings, and the inventor's name for a nonprovisional patent application through the USPTO's EFS-Web system. *See* Walker Decl., ¶5. The USPTO returned an Electronic Acknowledgment Receipt confirming that the nonprovisional patent application was received. *See* Walker Decl., ¶7. Further on June 5, 2006, the above-identified nonprovisional patent application was co-pending with and claimed the benefit of U.S. Patent Application No. 10/689,504 (the parent application) as required by 35 U.S.C. § 120 and 37 CFR § 1.78(a)(1) - (a)(3). *See* Walker Decl., ¶2.

25315

CUSTOMER NUMBER

02/22/2007 GWORDF1 00000030 GILAD ODINAK  
01 FC:1462 400.00 OP

- 1 -

INTL-1-1049PAFD

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In the alternative and with respect to 37 C.F.R. § 1.53(e)(1), the above-identified nonprovisional patent application was deposited under paragraph 1.53(d) and a correspondence address was provided by way of a customer number. *See* Walker Decl., ¶¶4 and 5; and Exhibits B and C. Applicant acknowledges that the above-identified nonprovisional was not a design patent application and was mistakenly filed under paragraph 1.53(d). Nevertheless, Applicant was never notified by the USPTO, never given a period of time within which to correct the filing error, and the application has not been treated as a Request for Continued Examination under 37 C.F.R. § 1.114.

Although Applicant has submitted the fee for this Petition, Applicant believes that the Petition fee and any extension of time fees should be waived because the Applicant was never notified nor given a chance to correct the filing error as required under 37 C.F.R. § 1.53(e)(1). But, as part of Applicant's *bona fide* attempt to advance the application, the Deputy Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16, 1.17 and 1.18 which may be required during the entire pendency of the application, or credit any overpayment, to Deposit Account No. 501050. This authorization also hereby includes a request for any extensions of time of the appropriate length required upon the filing of any reply during the entire prosecution of this application.

For the reasons set forth above as well as in the attached Declaration of Ms. Walker, Applicant respectfully requests that the above-identified nonprovisional patent application be accorded a filing date of June 5, 2006. In the alternative, Applicant respectfully requests that the application be treated as an RCE pursuant to 37 C.F.R. § 1.114 with an effective date of June 5, 2006.

Respectfully submitted,

BLACK LOWE & GRAHAM<sup>PLLC</sup>



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MAIL STOP PETITIONS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gilad Odinak et al.

Attorney Docket No. INTL-1-1049

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Title: SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE  
DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION

PETITION TRANSMITTAL LETTER

TO THE COMMISSIONER FOR PATENTS:

A. Petition Transmittal

Transmitted with this letter is

- Petition to Accord Filing Date
- 
- Declaration of Tricia Walker
- 
- Exhibit A, EFS-Web screen
- 
- Exhibit B, specification, drawings and declaration
- 
- Exhibit C, Electronic Acknowledgement Receipt
- 
- Exhibit D, Image File Wrapper screen
- 
- Check No. 18373 in the amount of \$400 (Petition fee)
- 
- Return Post Card

B. Additional Fee Charges or Credit for Overpayment

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16, 1.17 and 1.18 which may be required during the entire pendency of the application, or credit any overpayment, to Deposit Account No. 501050. This authorization also hereby includes a request for any extensions of time of the appropriate length required upon the filing of any reply during the entire prosecution of this application. *A copy of this letter is enclosed.*

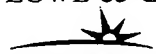
Direct all communications to:

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INTL-1-1049TL01

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MAIL CERTIFICATE

I hereby certify that this communication is being deposited with the United States Postal Service via First Class Mail under 37 C.F.R. § 1.08 on the date indicated below addressed to: MAIL STOP PETITIONS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

02.15.07  
Date of Deposit

  
Tricia Walker

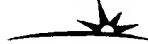
Enclosures: Declaration of Tricia Walker w/enclosures

Check No. 18373 in the amount of \$400 (petition fee)

Postcard

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- 3 -  
INTL-1-1049PAFD

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## DECLARATION OF TRICIA WALKER

I, Tricia Walker declare and state as follows:

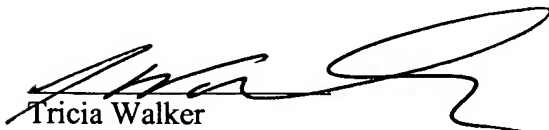
1. I am a legal assistant employed by the law firm of Black, Lowe & Graham, PLLC.
2. On June 5, 2006, I had to file a continuation of U.S. Patent Application No. 10/689,504 (hereinafter referred to as "the parent application"). I used the EFS-Web system and one of the options presented on the drop down menu was an option to file a continuation application. A true and accurate copy of the computer screen showing the EFS-Web option to file a continuation application is attached as Exhibit A. Therefore, I selected the "Continued Prosecution Application – Continuation (ACPA) drop down menu shown in Exhibit A so I could file a nonprovisional utility "continuation" patent application.
3. I electronically submitted the documents for the nonprovisional utility "continuation" patent application to the USPTO using the "Continued Prosecution Application – Continuation (ACPA) drop down menu of the EFS-Web system. A true and accurate copy of the nonprovisional patent application is attached as Exhibit B. The nonprovisional patent application is entitled "SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION," the first named Applicant is Gilad Odinak, and the Attorney Docket No. is INTL-1-1049. This application claims the benefit of the filing date of the parent application.
4. Exhibit B includes at least a specification, claims, drawings, and a named inventor. Also included is the oath or declaration.
5. After electronically submitting the documents of Exhibit B on June 5, 2006, I received an Electronic Acknowledgment Receipt from the USPTO verifying that the documents of

Exhibit B were successfully filed and had been received by the USPTO. A true and accurate copy of the Electronic Acknowledgment Receipt is attached as Exhibit C.

6. On February 9, 2007, I verified that the nonprovisional utility "continuation" patent application was received by the USPTO on June 5, 2006. The Image File Wrapper, as viewed on the Patent Application Information Retrieval (PAIR) system of the USPTO, clearly shows that the USPTO received a specification and drawings on June 5, 2006. A true and accurate copy of a printout of the Image File Wrapper for the parent application is attached as Exhibit D.

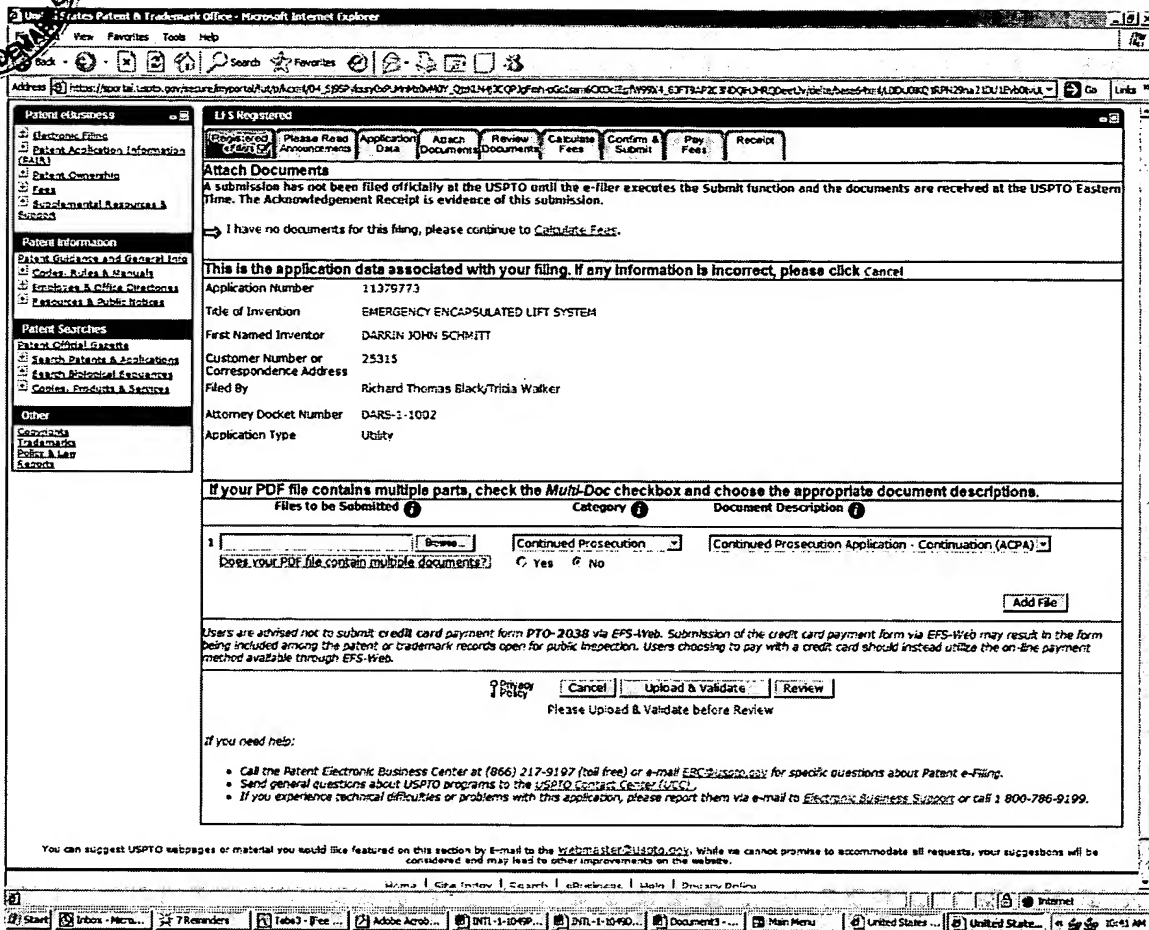
I further declare that all statements that I have made of my knowledge are true, and that all statements made on information and belief are believed to be true. I understand that the making of willfully false statements and the like is punishable by fine or imprisonment under 18 U.S.C. § 1001 and may jeopardize the validity of the application or any patent issuing thereon.

02.15.07  
Date

  
Tricia Walker

- Enclosures:
- Exhibit A - A printout of the computer screen showing the EFS-Web option to file a continuation application;
  - Exhibit B - The nonprovisional utility “continuation” patent application as transmitted via the EFS-Web system and received by the USPTO on June 5, 2006;
  - Exhibit C - Copy of the Electronic Acknowledgement Receipt received from the USPTO on June 5, 2006 via the EFS-Web system; and
  - Exhibit D - Copy of the Image File Wrapper Screen from the USPTO’ PAIR website downloaded on February 9, 2007.







5

10                   **SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE  
DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION**

INVENTORS  
Gilad Odinak  
Marc Phillips  
Nishith Chaubey

15

**PRIORITY CLAIM**

20                   This application is a Continuation of 10/689,504 filed October 21, 2003 which is a  
Continuation of U.S. Application Serial No. 10/273,403 filed October 16, 2002, now U.S.  
Patent No. 6,671,617, which claims priority from U.S. Provisional Application Serial  
No. 60/280,378 filed March 29, 2001, and a continuation of U.S. Non-provisional  
Application Serial No. 09/884,856 filed June 18, 2001, now U.S. Patent No. 6,487,495. Each  
and all of the foregoing applications is incorporated by reference as if fully set forth herein.

**FIELD OF THE INVENTION**

25                   This invention relates generally to communication and computing systems and  
methods and, more specifically, to a system and method for directing a motorist to a  
destination.

**BACKGROUND OF THE INVENTION**

30                   With advances in on-board vehicle computer systems and wireless technologies,  
vehicle navigation systems that provide users with current location and driving directions to a  
desired destination have become a reality. Vehicle navigation systems have taken one of two  
forms: on-board systems and network-based systems. On-board systems are driven by a

computer and associated database resident in each vehicle. These systems generate driving instructions based on user voice or keyboard input and map information stored in the on-board computing system. Network-based navigation systems do not rely on an on-board computer and associated database, but rather provide a voice interface to an off-vehicle  
5 computer or human information provider.

Significant disadvantages exist with both forms of vehicle navigation systems. The on-board navigation system requires expensive and quickly outdated computer hardware. Moreover, with the on-board computing approach, the database needs to be updated periodically to maintain current navigation information. Indeed, such systems can never  
10 really be up to date or comprehensive as they rely on external updates, typically via a CD-ROM or other removable electronic storage medium. The network-based system requires an open wireless link to the server. In these systems, the user typically dials a number and gives their starting and ending addresses (current location and destination). The system computes the route and vocally recites it to the user turn by turn. If the user hangs up, or it  
15 otherwise disconnected, they need to call again and give their new location and the destination address. Maintaining an active phone connection, especially in a situation involving long distance travel, is inefficient and expensive, as well as distracting to the vehicle user.

Thus, there is a need for a system and method that addresses the disadvantages  
20 associated with current attempts at vehicle navigation systems.

#### SUMMARY

The present invention provides a system and method for reducing the amount of repetitive data sent by a server to a client for vehicle navigation. The system includes a computer-based vehicle unit located in a vehicle, a gateway configured to wirelessly send  
25 and receive trip information to and from the vehicle unit, and a computer-based server in communication with the gateway over a network. The vehicle unit wirelessly receives signals from a computer-based server that include the desired navigation information. The vehicle unit includes a user interface component that presents the received navigation information and record user requests. The server processes the requests, generates a trip plan according to  
30 the navigation information, and sends the generated trip plan back to the vehicle unit via a gateway when a request is completed.

The server includes a receiving component that receives information from the vehicle unit via the gateway, a trip plan generator that generates a plan according to navigation information, vehicle coordinates, and trip navigation instructions. The trip plan generated  
35 includes a table of locations for the trip plan associated with the navigation instructions.

Along with the receiving component, the server includes a first sending component that sends the generated trip plan table to the vehicle unit via the gateway. The server also includes a transaction component that completes a transaction based upon the navigation instructions and the trip plan generated. The vehicle unit chooses navigation prompts included in the trip plan based on a comparison of the present vehicle coordinates and the trip plan. The chosen navigation prompts are dependent upon whether the vehicle coordinates are within a reasonable threshold value from the location associated with the navigation prompts.

In accordance with further aspects of the invention, the user requests include voice instructions.

In accordance with still further aspects of the invention, the user interface includes a microphone for recording voice instructions and a speaker for presenting received voice prompts audibly.

In accordance with yet other aspects of the invention, the transaction component includes a voice recognition processor configured to perform voice recognition processing of the recorded requests.

In accordance with other aspects of the invention, the navigation prompts include voice prompts.

In accordance with further aspects of the invention, if the vehicle coordinates are not within a reasonable threshold value from the location associated with the navigation prompts the vehicle unit contacts the server and requests a new trip plan using the current vehicle coordinates.

As will be readily appreciated from the foregoing summary, the invention provides a system and method for reducing the amount of repetitive data sent by a server to a client for vehicle navigation, as well as reduce the airtime required for such computation.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The preferred and alternative embodiments of the present invention are described in detail below with reference to the following drawings.

FIGURE 1 is a diagram illustrating the general architecture of a system that operates in accordance with the present invention; and

FIGURES 2 and 3 are flow charts illustrating various embodiments performed by the system shown in FIGURE 1.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

The present invention is a vehicle navigation system 10 that includes a vehicle 12 with an in-vehicle telematic control unit (TCU) 14. TCU 14 is in wireless communication

with a server 16 over a network 18. Network 18 preferably includes components for receiving wireless signals from TCU 14 and converting the signals for wire or wireless transmission to server 16. The network is preferably the Internet, but could be any public or private data network. Network 18 includes a gateway (not shown) that can send and receive  
5 wireless signals to and from TCU 14, and can communicate through other components (e.g., routers) in the network to server 16. The wireless signals include information that is preferably in packet form, although the information may be in alternative forms. TCU 14 includes a processor 20 coupled to a user interface 22, a global positioning system (GPS) unit 24, a radio module 26 and local storage or memory 28. User interface 22  
10 preferably includes a speaker and a microphone (not shown), and may include a display. The user interface may also include on-or-off screen user interface buttons. Radio module 26 is capable of sending and receiving both voice and data. Server 16 includes a processor 30 and a database 32 that holds vehicle navigation information: maps, road conditions and terrain, lane information and changes, touring instructions, etc.

15 System 10 of the present invention minimizes the amount of airtime used between TCU 14 and server 16 to send a trip plan. When a user asks the system for directions, the vehicle's local coordinates (as determined by GPS unit 24) are sent from TCU 14 to server 16 over network 18. The user also specifies their destination to the TCU. Entry of the user's navigation instruction request, including the destination information, is preferably  
20 done vocally through the microphone, but may be accomplished by other data entry means, such as via user interface buttons. The TCU transmits the vocalized destination to server 16. The server calculates the trip plan and generates a table of locations (expressed as location coordinates, such as GPS coordinates) and the corresponding navigation prompts (e.g. turn left onto Howel St.). These navigation prompts are preferably voice prompts, but may  
25 include other forms of user notification, such as textual messages or different audible, visual or other signals. The table with navigation prompts is sent to TCU 14 in vehicle 12. In an alternate embodiment, the navigation prompts are sent as an audio file (assuming voice prompts), such as a WAV file or an MP3 file. In another embodiment, the table includes locations identified in text form that are displayed or converted to audio by a  
30 text-to-speech (TTS) component of processor 20. The navigation prompts could also include symbols that indicate common words such as "turn," "left," "onto," "street," and "avenue," combined with the vocal recording of the name of the proper noun "Howell" street. As the vehicle moves according to the trip plan and arrives at a location whose GPS coordinates match those of an entry in the table, the corresponding voice prompt is played through the  
35 speakers to the system user. This process is described in more detail in FIGURE 2.

FIGURE 2 is a flow diagram of a process performed by system 10 shown in FIGURE 1. First, at block 50, the user initiates a trip request. Trip request initiation can occur in a number of ways. For example, the user may select a trip request button included in user interface 22, or speak a start trip request command into the microphone that is interpreted by voice recognition software executed by processor 20; either action causes processor 20 to begin a trip request. At blocks 52 and 54, the initiated trip request causes TCU 14 to send the vehicle's GPS coordinates and any user entered instructions of the destination to server 16. At block 56, server 16 interprets the voice instructions to determine the destination. Interpreting includes performing voice recognition processing. Next, at block 58, the server generates a trip plan according to vehicle navigation information such as stored map or other navigation information, the vehicle GPS coordinates, and the interpreted voice instructions of the destination. At block 60, a table of locations is generated for the trip plan. The table includes trip plan information, such as landmarks, turns, road changes or other significant travel-related information. Each location entry in the table includes an associated voice or text prompt. At block 62, the trip plan including the table is sent to the TCU.

At decision block 64, once the vehicle receives the trip plan table, TCU 14 determines if the vehicle is adhering to the trip plan. The TCU periodically checks the vehicle's GPS location and determines if it is on the trip plan or within a threshold value from the trip plan. This threshold value may be a function of the distance from a known location in the trip plan, or location relative to known geographic marks, or some combination of various factors. Within the threshold value, the system can document the present location of the vehicle in relation to the trip plan and chart the navigational path to return to the trip plan or a modified trip plan. If the vehicle is not adhering to the trip plan, the TCU contacts server 16 and requests a new trip plan according to the present vehicle location (block 66). If the TCU determines the vehicle is adhering to the trip plan, the TCU determines whether the vehicle is at an identified location within the trip plan table (decision block 68). If the vehicle is not at a location identified in the trip plan table, the process continues checking locations according to decision blocks 64 and 68. If the vehicle is at a location in the trip plan table or within a threshold value from a location in the table, TCU 14 plays the voice prompt associated with the location in the table that corresponds to the vehicle's location (block 70). In another embodiment, voice recordings associated with pre-stored symbols are played in series with a proper-noun street identifier. Then, the process continues checking vehicle location according to decision blocks 64 and 68.

In an alternate embodiment, the system may cache parts of a voice prompt that are later combined by processor 20 to create a navigation instruction. For example, TCU 14 receives the following voice prompts from server 16:

- (a) "turn left onto Howel Street";
- 5 (b) "turn left onto 4th Avenue".

A caching component performed by processor 20 caches 3 sub-prompts:

- #17 "turn left"
- #18 "Howell Street"
- #19 "4th Avenue".

10 The tag identifiers for the (a) and (b) voice prompts include tag identifiers for the sub-prompts (i.e. a = #17 #18; b = #17 #19). So in effect, in this alternate embodiment, each tag is a series of sub-tags. Server 16 may send just the tag identifiers for the sub-prompts. Processor 20 combines the sub-prompts according to the order the tag identifiers were received and presents the combination to the user.

15 FIGURE 3 is a flow diagram of an alternative process performed by system 10 shown in FIGURE 1. First, at block 80, the user sends a trip request to server 16 (see blocks 50-56 of FIGURE 2). At block 82, the server calculates a trip plan, creates a trip plan table according to the calculated trip plan, and sends the trip plan table to the user's TCU 14. The trip plan table includes locations and associated navigation (preferably voice) prompts. At  
20 block 84, as the user is traveling according to their trip plan, TCU 14 compares the vehicle's present location (GPS generated) to the received table. At decision block 86, if the vehicle's present location is not in the trip plan table, the process returns to block 84, where it continues comparing the vehicle's present location to the entries in the trip plan table. If there is a corresponding location entry in the trip plan table, the logic proceeds to decision  
25 block 88. At decision block 88, if the table has a corresponding stored voice prompt, TCU 14 retrieves and plays the corresponding stored voice prompt (block 90). If, at decision block 88, TCU 14 determines that a corresponding voice prompt does not exist in the table or elsewhere in memory 28, the TCU sends a request to the server to send a voice prompt according to a tag identifier that indicates the missing voice prompt (block 92). At block 94,  
30 server 16 sends the requested voice prompt. At block 96, the TCU plays the received voice prompt. At block 98, the TCU stores the received voice prompt for possible later use. At block 100, the TCU purges saved voice prompts according to a scheduled purge request, to a user purge request, or to a purge request sent from the server 16.

35 In an alternate embodiment, the steps performed at blocks 82-84 are performed at server 16, and the server does not send the table to the requester, but compares the vehicle's

present location (GPS generated) to the server-generated table. If an associated voice prompt is present, the server sends a tag identifier associated with the voice prompt to TCU 14. The TCU compares the sent tag identifier to previously received voice prompts that are stored in memory 28 according to assigned tag identifiers. If an appropriate voice prompt is in  
5 memory 28, processor 20 retrieves it and presents it to the user via user interface 22. If a voice prompt is not found, TCU 14 sends a request to server 16 for the actual voice prompt, which is presented to the user when received from the server.

While the preferred embodiment of the invention has been illustrated and described, as noted above, many changes can be made without departing from the spirit and scope of the  
10 invention. For example, the types of communication between the vehicle and the server may be all wireless, the components of the server may be distributed over the network, and the location identifier may be a non-satellite system that determines vehicle location based on ground-based transmitters. Also, the order of the steps performed in the described embodiments may be altered without departing from the scope of the invention. Accordingly,  
15 the scope of the invention is not limited by the disclosure of the preferred embodiment. Instead, the invention should be determined entirely by reference to the claims that follow.



The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A vehicle navigation method comprising:
  - initiating a trip request, including trip request information;
  - 5 determining vehicle coordinates;
  - sending vehicle coordinates and the entered trip request information to a server over a network;
  - generating a trip plan according to navigation information stored in a memory associated with the server, the vehicle coordinates, and the trip request
  - 10 information, wherein the generated trip plan includes a table of locations of the trip plan with associated navigation prompts;
  - sending the generated trip plan table to the vehicle over the network;
  - comparing present vehicle coordinates to the trip plan table; and
  - 15 if, according to the comparison, the vehicle coordinates are within a threshold value from a location in the table, presenting the navigation prompt associated with the location in the table that is within the threshold value of the vehicle's location.
2. The method of claim 1, wherein trip request information includes voice instructions.
- 20 3. The method of claim 2, wherein generating comprises determining a destination by interpreting the trip voice instructions by performing voice recognition processing.
4. The method of claim 1, wherein the navigation prompts include voice prompts.
5. The method of claim 1, further comprising determining if the vehicle is adhering to the trip plan, wherein determining adherence comprises:
  - 25 determining distance of the vehicle coordinates to the trip plan; and
  - if the vehicle coordinates are not within a threshold value from the trip plan, sending present vehicle coordinates to the server, generating a new trip plan and trip plan table based on the sent present vehicle coordinates, and sending the new trip plan table to the vehicle.
- 30 6. The method of claim 1, wherein generating comprises determining a destination by interpreting the trip voice instructions by performing voice recognition processing.

7. The method of claim 1, further comprising determining if the vehicle is adhering to the trip plan, wherein determining adherence comprises:

5       determining the distance of the vehicle coordinates to a trip plan location; and  
if the vehicle coordinates are not within a threshold value from the trip plan  
location, sending present vehicle coordinates to the server, generating a new  
trip plan and trip plan table based on the sent present vehicle coordinates, and  
sending the new trip plan table to the vehicle.

8. The method of claim 1, wherein:

10       retrieving comprises when a voice prompt is not previously stored at the vehicle,  
sending a request to the server for the non-stored voice prompt and sending  
the non-stored voice prompt from the server to the vehicle; and  
presenting comprises presenting the sent voice prompt.

9. The method of claim 8, wherein retrieving further comprises saving the sent voice prompt according to the corresponding identifier.

15       10. The method of claim 1, further comprising purging saved voice prompts according to a scheduled purge request.

11. The method of claim 1, further comprising purging saved voice prompts according to a user purge request.

20       12. The method of claim 1, further comprising purging saved voice prompts according to a server generated purge request.

13. A vehicle navigation system comprising:

25       a computer-based vehicle unit located in a vehicle for receiving and transmitting trip request information and receiving trip plan navigation information, the computer-based vehicle unit having a processor and associated memory, a user interface, a global positioning system for determining vehicle coordinates, and a radio unit;

a network configured to wirelessly send and receive trip request information to and from the vehicle unit via the radio unit; and

30       a computer-based server in communication with the network for receiving trip request information from the computer-based vehicle unit, generating a trip plan according to navigation information stored in a memory associated with

the server and the trip request information, and sending the generated trip plan to the vehicle unit over the network.

14. The system of claim 13, wherein the generated trip plan includes a table of locations of the trip plan with associated navigation prompts.

5        15. The system of claim 14, wherein:

the computer-based vehicle unit compares present vehicle coordinates to the trip plan table; and

10        if, according to the comparison, the vehicle coordinates are within a threshold value from a location in the table, the vehicle unit presents the navigation prompt associated with the location in the table that is within the threshold value of the vehicle's location.

16. A vehicle navigation apparatus comprising:

means for initiating a trip request;

means for entering trip voice instructions;

15        means for determining vehicle coordinates;

means for sending vehicle coordinates and the entered voice instructions to a server over a network;

20        means for generating a trip plan according to vehicle navigation information stored in a memory associated with the server, the vehicle coordinates, and the trip voice instructions, wherein the generated trip plan includes a table of locations of the trip plan and each location entry in the table includes an associated voice prompt;

means for comparing present vehicle coordinates to the trip plan table; and

25        if, according to the comparison, the vehicle coordinates are within a threshold value from a location in the table, means for retrieving at least one of a voice prompt or voice prompt tag identifier, means for sending the retrieved at least one of a voice prompt or voice prompt tag identifier to the vehicle, and means for presenting the sent voice prompt or a previously stored voice prompt associated with the sent voice prompt tag identifier.

# **SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION**

## **ABSTRACT OF THE DISCLOSURE**

5 A system and method for reducing the amount of repetitive data sent by a server to a client for vehicle navigation. The system includes a computer-based vehicle unit located in a vehicle, a gateway configured to wirelessly send and receive trip information to and from the vehicle unit, and a computer-based server in communication with the gateway over a network. The vehicle unit wirelessly receives signals from a computer-based server that includes the desired navigation information in packet form. The vehicle unit includes a user  
10 interface component that presents the received navigation information and records user requests. The server processes the requests, generates a trip plan according to the navigation information and sends the generated trip plan back to the vehicle unit via a gateway when a request has been completed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Odinak et al. Attorney Docket No. WING-1-1011  
Serial No.: 09/884,856 Group Art Unit: 3747  
Filing Date: June 18, 2001 Examiner: —  
Title: SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF  
REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE  
NAVIGATION

COMBINED DECLARATION AND POWER OF ATTORNEY  
IN PATENT APPLICATION

As the inventors of the invention disclosed in the patent application entitled SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION, we each hereby declare as follows:

Our residences, post office addresses and citizenship are:

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I believe that we are the original, first and sole inventors of the subject matter that is claimed and for which a patent is sought on the invention entitled SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION, the specification of which is attached to this declaration.

I have reviewed and understand the contents of the above-identified patent application, including the claims.

I acknowledge the duty to disclose information, which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international

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application which designated at least one country other than the United States of America, for the application(s) listed below. I have also identified below any foreign application(s) for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed: NONE

I hereby claim the benefit under 35 U.S.C. 119(e) of the following United States provisional application: 60/280,378 filed March 29, 2001.

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information that is material to patentability as defined 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application: NONE

I hereby appoint the following attorneys and agents to prosecute this application and to transact all related business in the Patent and Trademark Office or the Courts: Richard T. Black, Washington State Bar No. 20,899 and PTO Reg. No. 40,514; David A. Lowe, Washington State Bar No. 24,453 and PTO Reg. No. 39,281; Lawrence D. Graham, Washington State Bar No. 25,402 and PTO Reg. No. 40,001; Mark L. Lorbiecki, Washington State Bar No. 16,796 and PTO Reg. No. 45,643; and Michael S. Smith PTO Reg. No. 39,563.

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I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that

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these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Gilad Odinak

9/25/01  
\_\_\_\_\_  
Date

*Marc Phillips*  
\_\_\_\_\_  
Marc Phillips

09/24/01  
\_\_\_\_\_  
Date

*Nishith K. Chaubey*  
\_\_\_\_\_  
Nishith K. Chaubey

I hereby further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

9/10/01  
Date

GA  
Gilad Odinak

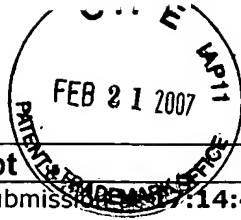
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Marc Phillips

05/24/01  
Date

Nishith K. Chaubey  
Nishith K. Chaubey



**Acknowledgement Receipt**

The USPTO has received your submission on **JUN-05 17:14:46** Eastern Time on **05-JUN-2006**.

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**eFiled Application Information**

EFS ID	1067514
Application Number	10689504
Confirmation Number	4395
Title	SYSTEM AND METHOD FOR REDUCING THE AMOUNT OF REPETITIVE DATA SENT BY A SERVER TO A CLIENT FOR VEHICLE NAVIGATION
First Named Inventor	Gilad Odinak
Customer Number or Correspondence Address	25315
Filed By	Michael Stevens Smith/Tricia Walker
Attorney Docket Number	INTL-1-1038
Filing Date	21-OCT-2003
Receipt Date	05-JUN-2006
Application Type	Utility

**Application Details**

Submitted Files	Page Count	Document Description	File Size	Warnings
INTL-1-1049AP.pdf	14	Continued Prosecution Application - Continuation (ACPA)	93918 bytes	◆ PASS
INTL-1-1049FIGS.pdf	3	Drawings	103048 bytes	◆ PASS
INTL-1-1049DPOAsigned.pdf	4	Oath or Declaration filed	160286 bytes	◆ PASS
fee-info.pdf	2	Fee Worksheet (PTO-875)	8462 bytes	◆ PASS

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance

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### Available Documents

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